EOS Science Networks Performance Report

This is a summary of EOS QA SCF performance testing for the 4th quarter of 2006 -- comparing the performance against the requirements from BAH, including Terra, TRMM, and QuikScat, Aqua, Aura, and ICESat requirements

Up to date graphical results can be found on the EOS network performance web site: http://ensight.eos.nasa.gov/active_net_measure.html. Or click on any of the individual site links below.

Highlights:

- Increased congestion from ICESAT at GSFC further reduced performance.
  - Had dropped last period, but now even lower
  - But no change to the same destinations from GSFC-ENPL node
- Increased congestion from EBnet router at GSFC to the "Doors"
  - Reduced daily worst performance from GES-DAAC, MODIS, GSFC-PTH
  - Compare performance with GSFC-ENPL.
- UIUC: Test node down for this period
- Otherwise, very stable performance. **All ratings are "Adequate" or better!**
- The Feb '06 requirements are used as the basis for the ratings

Ratings:

Rating Categories:

Excellent: median of daily worst cases > 3 x requirement
Good: median of daily worst cases > requirement

Adequate: median of daily worst cases < requirement
and
median of daily medians > requirement

Low: median of daily medians < requirement.
Bad: median of daily medians < 1/3 of the requirement.

Ratings Changes:

Upgrades: ↑

GSFC → Oxford: Low→ **Excellent**

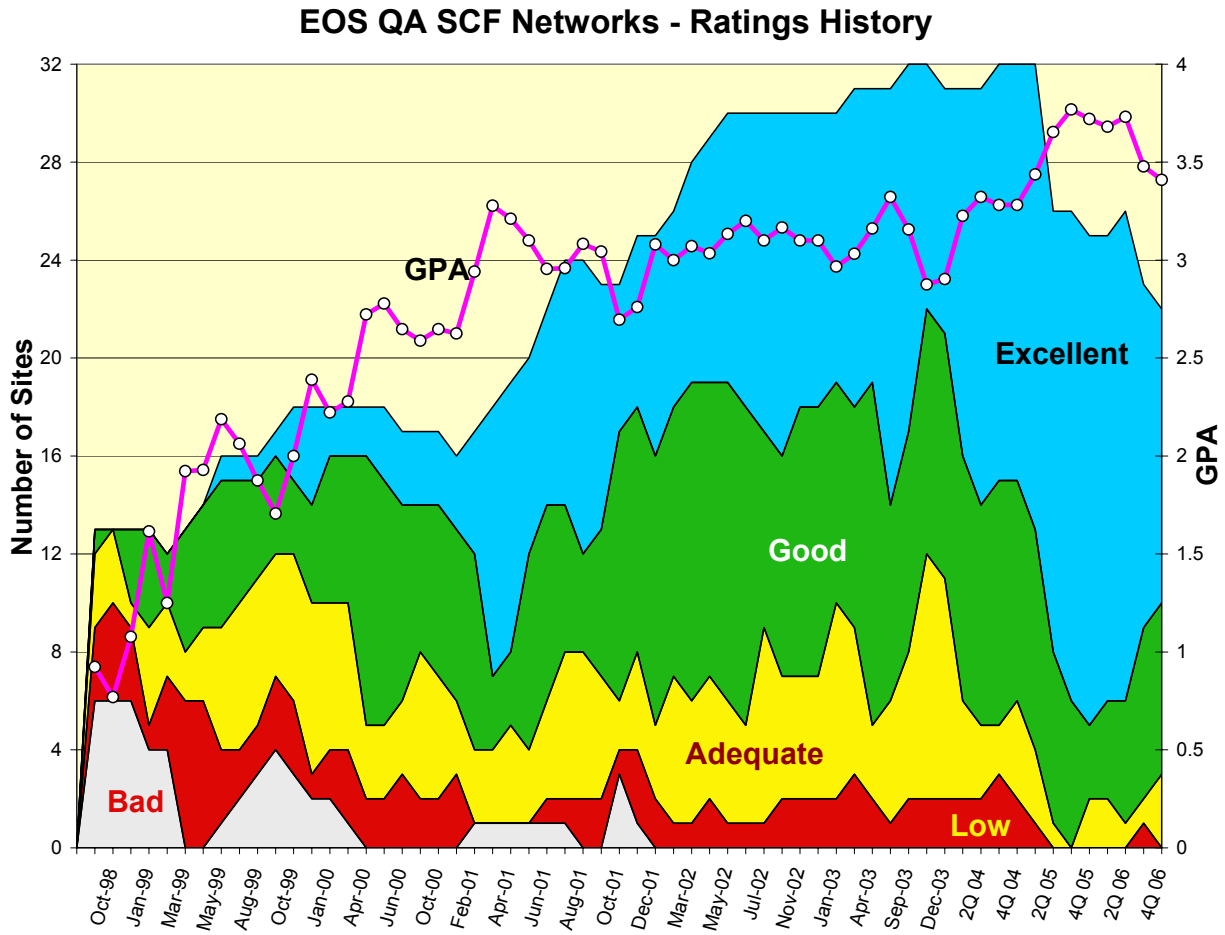
Downgrades: ↓

GSFC-ICESAT → UCSD: Good → **Adequate**
GSFC-ICESAT → MIT: Excellent → **Good**
GSFC-ICESAT → Texas: Good → **Adequate**
LaRC ASDC DAAC → UCL: Excellent → **Good**

Testing Discontinued: UIUC

Ratings History:

The chart below shows the number of sites in each classification since the testing started in 1998. Note that these ratings do NOT relate to absolute performance -- they are relative to the EOS requirements. The GPA is calculated based on Excellent: 4, Good: 3, Adequate: 2, Low: 1, Bad: 0



Note that there are fewer sites included in this chart since 1Q'05 due to:

- 4Q06: Testing to UIUC down
- 3Q06: Discontinuation of tests to NOAA and UMD
- 2Q06: Discontinuation of tests to SAGE III Nodes
- 2Q05: moving the data for SIPS sites to the "EOS Production sites" performance report (NCAR, KNMI, RSS. GSFC → JPL, NSSTC → NSIDC, and GSFC-SAFS → SAGE III MOC).

EOS QA SCF Sites: Network Requirements vs. Measured Performance

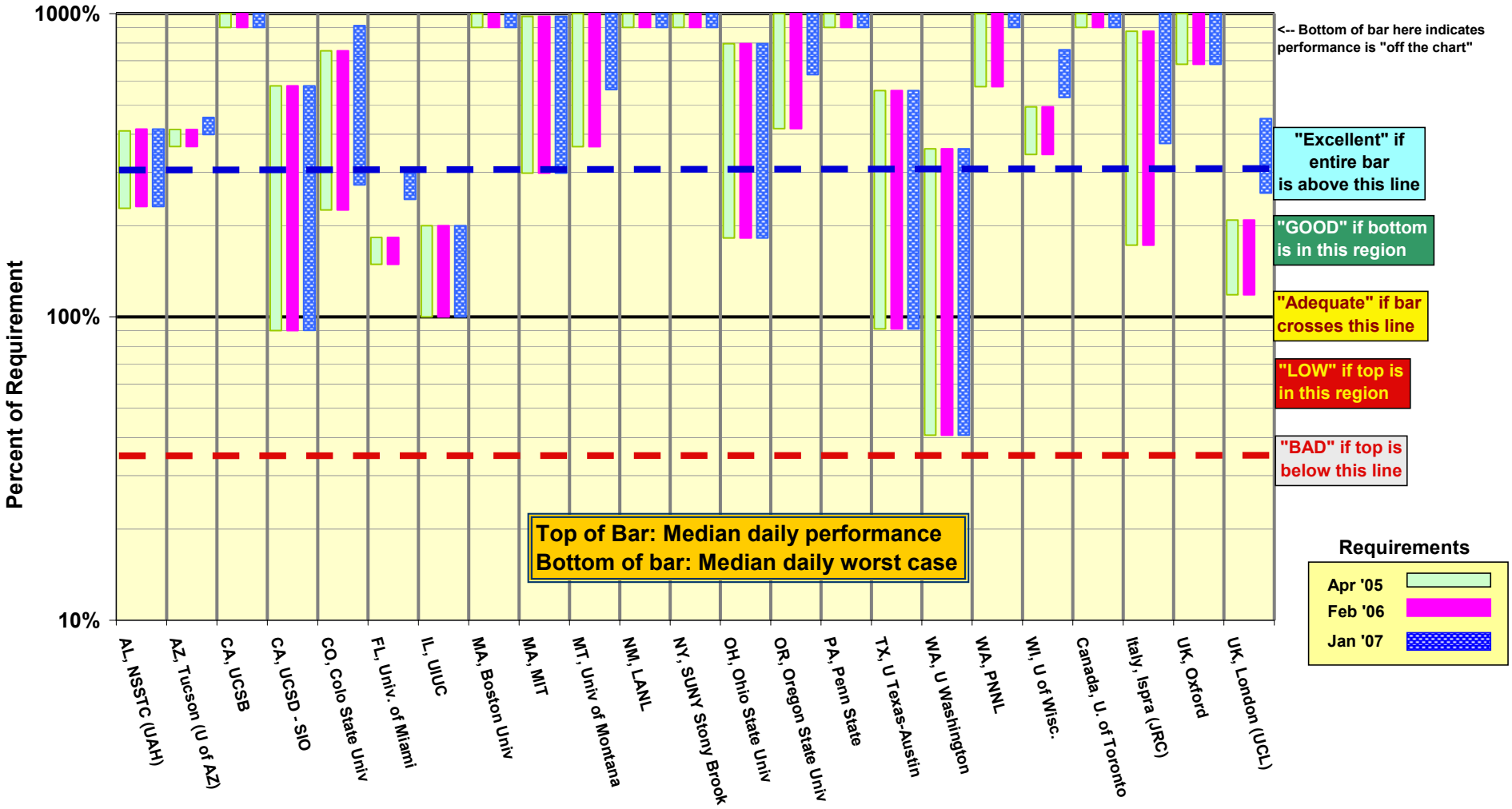
4th Quarter 2006		Requirements (mbps)			Testing						
Destination	Team (s)	Previous: Apr-05	Current: Feb-06	Future: Jan-07	Source Node	Median mbps	Median Daily Worst	Rating re Current Requirements: 4 Q 2006	3Q06	Rating re Jan-07	Route Tested
AL, NSSTC (UAH)	CERES, AMSR-E	7.1	7.0	7.0	LaTIS	29.3	16.3	GOOD	G	GOOD	NISN + FDDI
AZ, Tucson (U of AZ)	MODIS	2.8	2.8	2.6	EROS LPDAAC	11.7	10.3	Excellent	E	Excellent	Abilene via Chicago
CA, UCSB	MODIS	3.1	3.1	2.2	GDAAC	85.5	43.6	Excellent	E	Excellent	Abilene via MAX
CA, UCSD - SIO	ICESAT, CERES	7.1	7.1	7.1	GSFC-ICESAT	41.1	6.4	Adequate	G	Adequate	Abilene via NISN / MAX
CO, Colo State Univ	CERES	2.1	2.1	1.8	LaTIS	16.2	4.8	GOOD	G	GOOD	NISN -> Abilene via Chicago
FL, Univ. of Miami	MODIS, MISR	18.8	18.8	11.5	GDAAC	34.4	28.1	GOOD	G	GOOD	Abilene via MAX
IL, UIUC	MISR	1.1	1.1	0.6	LaRC DAAC	n/a	n/a	n/a	E	n/a	Abilene via NISN / MAX
MA, Boston Univ	MODIS, MISR	3.0	3.0	2.0	EROS LPDAAC	87.5	61.6	Excellent	E	Excellent	Abilene via Chicago
MA, MIT	ICESAT	7.0	7.0	7.0	GSFC-ICESAT	68.5	20.9	GOOD	E	GOOD	Abilene via NISN / MAX
MT, Univ of Montana	MODIS	0.8	0.8	0.5	EROS LPDAAC	17.7	3.0	Excellent	E	Excellent	Abilene via Chicago
NM, LANL	MISR	1.0	1.0	0.5	LaRC DAAC	67.3	53.3	Excellent	E	Excellent	NISN -> ESNet via CA
NY, SUNY Stony Brook	CERES	0.6	0.6	0.5	LaTIS	45.9	27.3	Excellent	E	Excellent	NISN / MAX / Abilene / NYSERnet
OH, Ohio State Univ	ICESAT	6.3	6.3	6.3	GSFC-ICESAT	50.2	11.5	GOOD	G	GOOD	Abilene via NISN / MAX
OR, Oregon State Univ	CERES, MODIS	7.6	7.6	5.0	LaTIS	110.6	31.6	Excellent	E	Excellent	Abilene via NISN / MAX
PA, Penn State	MISR	2.6	2.6	1.9	LaRC DAAC	88.5	50.1	Excellent	E	Excellent	Abilene via NISN / MAX
TX, U Texas-Austin	ICESAT	11.1	11.1	11.1	GSFC-ICESAT	61.6	10.1	Adequate	G	Adequate	Abilene via NISN / MAX
WA, U Washington	ICESAT	11.7	11.7	11.7	GSFC-ICESAT	42.1	4.8	Adequate	G	Adequate	Abilene via NISN / MAX
WA, PNNL	MISR	1.4	1.4	0.7	LaRC PTH	70.5	8.3	Excellent	E	Excellent	NISN -> ESNet via CA
WI, U of Wisc.	MODIS, CERES, AIRS	16.5	16.5	10.7	GDAAC	81.2	56.5	Excellent	E	Excellent	Abilene via MAX
Canada, U. of Toronto	MOPITT	0.6	0.6	0.1	LaRC DAAC	42.0	23.5	Excellent	E	Excellent	NISN-CA*net4
Italy, Ispra (JRC)	MISR	0.5	0.5	0.2	LaRC DAAC	4.5	0.9	GOOD	G	Excellent	NISN-UUNET-Milan
UK, Oxford	HIRDLS	0.5	0.5	0.5	GSFC-ENPL	33.8	3.5	Excellent	L	Excellent	Abilene->Geant (NY) -> JAnet
UK, London (UCL)	MISR, MODIS	1.0	1.0	0.5	LaRC DAAC	2.2	1.2	GOOD	E	GOOD	NISN - MAX - Abilene->Geant (NY) -> JAnet

*Rating Criteria:	
Excellent	Median of Daily worst hours >= 3 *Requirement
GOOD	Median of Daily worst hours >= Requirement
Adequate	Median of Daily worst hours < Requirement <= Median of Daily Medians
LOW	Requirement > Median of Daily Medians
BAD	Requirement > 3 * Median of Daily Medians

Rating	Current Feb-06	Last Report	Future: Jan-07
Excellent	12	14	13
GOOD	7	7	6
Adequate	3	1	3
LOW	0	1	0
BAD	0	0	0
Total	22	23	22
GPA	3.41	3.48	3.45

EOS QA SCF Sites

Daily Median and Worst Performance as a percent of Requirements



Details on individual sites:

Each site listed below is the DESTINATION for all the results reported in that section. The first test listed is the one on which the rating is based -- it is from the source most relevant to the driving requirement. Other tests are also listed. The three values listed are derived from [nominally] 24 tests per day. For each day, a daily best, worst, and median is obtained. The values shown below are the medians of those values over the test period.

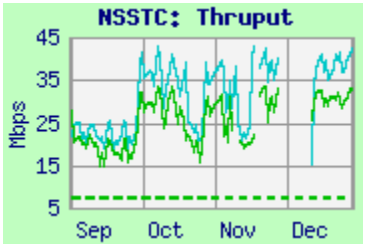
1) AL, NSSTC (UAH) (aka GHCC)

Rating: Continued **Good**

Teams: CERES, AMSR
Domain: nsstc.uah.edu
Web Page:http://ensight.eos.nasa.gov/Missions/terra/NSSTC.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC LaTIS	33.5	29.3	16.3	NISN SIP
GSFC-CNE	43.1	36.2	16.7	NISN SIP



Requirements:

Source Node	Date	Mbps	Rating
LaRC LaTIS	Feb '06	7.0	Good

Comments: Performance improved in late September (median from LaTIS was 20.5 mbps last quarter), but the rating remains "Good".

Note: Testing between NSSTC and NSIDC for AMSR-E (AQUA) is included in the "Production Sites" report.

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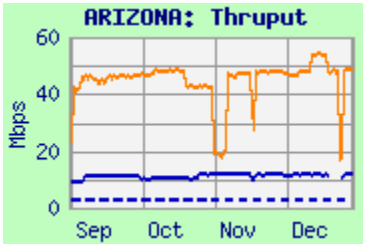
2) AZ, Tucson (U of AZ):

Rating: Continued **Excellent**

Teams: MODIS
Domain: arizona.edu
Web Page: http://ensight.eos.nasa.gov/Missions/terra/ARIZONA.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
EROS LPDAAC	12.8	11.7	10.3	Abilene via Chicago
GSFC	49.6	47.5	44.5	Abilene via MAX



Requirements:

Source Node	FY	Mbps	Rating
EROS LPDAAC	'03 - '07	2.8	Excellent

Comments: The ratings are based on the MODIS flow from EROS -- performance dropped from a median of 25 mbps at the beginning of April '06, but this is still sufficient to keep the rating "Excellent". Testing from GSFC was stable.

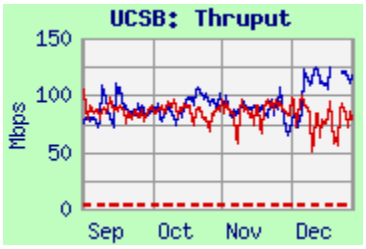
3) CA, UCSB:

Ratings: GSFC: Continued **Excellent**
EROS: Continued **Excellent**

Teams: MODIS
Domain: ucsb.edu
Web page: http://ensight.eos.nasa.gov/Missions/terra/UCSB.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-DAAC	110.4	85.5	43.6	Abilene via MAX
EROS-LPDAAC	110.1	90.5	67.7	Abilene via Chicago



Requirements:

Source Node	FY	mbps	Rating
GSFC-DAAC	'04 - '07	3.1	**Excellent**
EROS-LPDAAC	'04 - '07	2.2	**Excellent**

Comments: The requirements are split between EROS and GSFC. Performance from both GSFC and EROS has been stable since April '05, with an increase from EROS in December '06. The rating remains "Excellent" from both sites.

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4) CA, UCSD (SIO):

Ratings: ICESAT: ↓ Good → **Adequate**
LaTIS: Continued **Excellent**

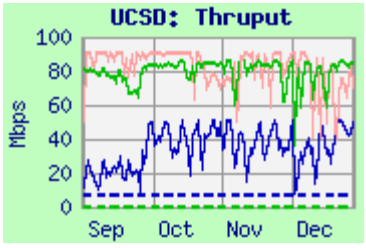
Teams: CERES, ICESAT
Domain: ucsd.edu
Web Page: http://ensight.eos.nasa.gov/Missions/terra/UCSD.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-ICESAT	50.9	41.1	6.4	Abilene via NISN / MAX
LaTIS	86.9	83.3	34.8	Abilene via NISN / MAX
GSFC-PTH	91.2	84.7	30.8	Abilene via MAX

Requirements:

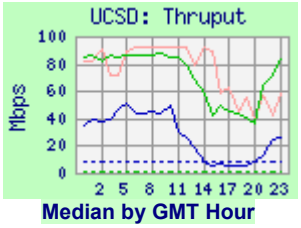
Source Node	FY	mbps	Rating
GSFC-ICESAT	'05 – '07	7.0	**Adequate**
LaTIS	'02 - '07	0.26	**Excellent**



Comments: The UCSD host was subject to diurnal congestion from all sources. This was combined with similar diurnal congestion from the ICESAT source host at GSFC to produce an 8:1 ratio in daily best to worst performance from ICESAT. The daily minimum dropped below the requirement this period, reducing the rating to "Adequate"

Performance from GSFC-PTH exhibited only a 3:1 best:worst ratio, similar to the previous period, and would rate "Excellent".

Performance from LaTIS was also similar to the previous period, with a 2.5:1 best:worst ratio. The LaTIS rating continues as "Excellent".



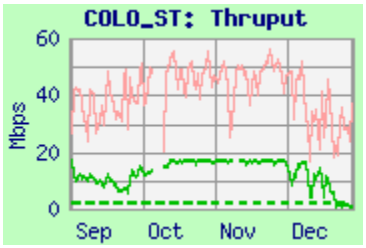
5) CO, Colo State Univ.:

Rating: Continued **Good**

Teams: CERES
Domain: colostate.edu
Web page: http://ensight.eos.nasa.gov/Missions/terra/COLO_ST.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaTIS	17.0	16.2	4.8	Abilene via NISN / MAX
GSFC	63.0	46.2	16.1	Abilene via MAX



Requirements:

Source Node	FY	mbps	Rating
LaTIS	'04 - '07	2.15	Good

Comments: Performance from both sources was stable in October and November, but dropped off in December (got better again in January). Performance from both sources is noisy, but the daily worst from LaTIS remained between the '05 requirement and 3 x the requirement, so the rating stayed "Good".

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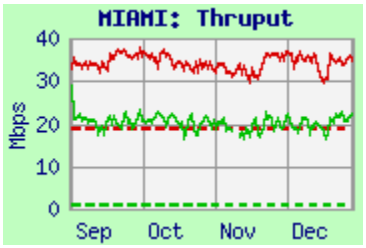
6) FL, Univ. of Miami:

Rating: GSFC:Continued **Good**
LaRC: Continued **Excellent**

Teams: MODIS, MISR
Domain: rsmas.miami.edu
Web page: http://ensight.eos.nasa.gov/Missions/terra/MIAMI.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-DAAC	39.6	34.4	28.1	Abilene via MAX
LaRC DAAC	25.3	20.1	12.6	Abilene via NISN / MAX



Requirements:

Source Node	FY	mbps	Rating
GSFC	'04 - '07	18.8	Good
LaRC DAAC	'04 - '07	1.1	Excellent

Comments: Thruput from all sources was very stable this period – but had dropped dramatically in Aug '05 (Medians were 133 mbps from GSFC and 38 mbps from LaRC at that time). The rating remains "Good" from GSFC, and "Excellent" from LaRC, due to the much lower requirement.

Along with the thruput decrease in Aug '05, an increase in packet loss was observed at the same time. Since this loss is observed from all sources, the problem appears to be in or near Miami.

7) IL, UIUC:

Rating: Excellent → n/a

Teams: MISR

Domain: uiuc.edu

Web Page: http://ensight.eos.nasa.gov/Missions/terra/UIUC.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC				Abilene via NISN / Chicago
GSFC				Abilene via MAX

Requirements:

Source Node	FY	mbps	Rating
LaRC DAAC	'04 - '06	1.13	n/a

Comments: The UIUC test host has been down since September '06, so testing has been temporarily discontinued. The POC reports the test host may be restored in April '07.

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8) MA, Boston Univ:

Ratings: EROS: Continued **Excellent**

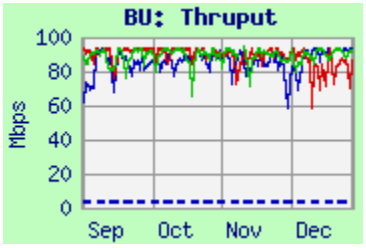
LaRC: Continued **Excellent**

Teams: MODIS, MISR Domain: bu.edu

Web Page: http://ensight.eos.nasa.gov/Missions/terra/BU.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
EROS DAAC	92.9	87.5	61.6	Abilene via Chicago
GSFC DAAC	93.4	89.4	52.8	Abilene via MAX
LaRC DAAC	93.4	90.2	53.6	Abilene via NISN / MAX



Requirements:

Source Node	FY	mbps	Rating
EROS DAAC	'04 - '07	3.0	Excellent
LaRC DAAC	'04 - '07	1.2	Excellent

Comments: Performance from all sources was very stable this period. The rating from both sources remains Excellent".

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9) MA, MIT:

Rating: Continued **Excellent**

Teams: ICESAT

Domain: mit.edu

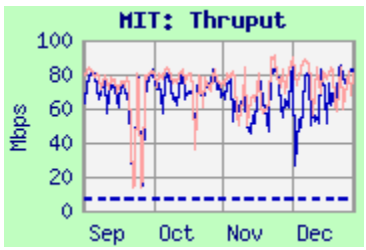
Web Page: http://ensight.eos.nasa.gov/Missions/icesat/MIT.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-ICESAT	85.7	68.5	20.9	Abilene via NISN / MAX
GSFC-PTH	87.3	77.2	34.8	Abilene via MAX

Requirements:

Source Node	FY	mbps	Rating
GSFC	'05 – '07	7.0	Excellent



Comments: Performance from GSFC ICESAT to MIT is still subject to diurnal congestion inside GSFC, a bit more than previously (Best:worst ratio is 4.1). The daily worst is now slightly below 3 x the requirement, so the rating drops to "Good". From GSFC-PTH there is less congestion apparent (Best:worst ratio is only 2.5:1), -- would be rated "Excellent".

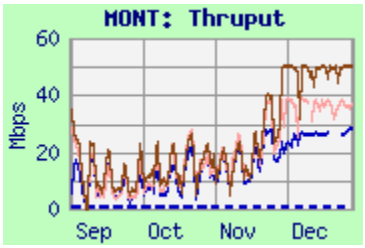
10) MT, Univ of Montana:

Rating: Continued **Excellent**

Teams: MODIS
Domain: ntsg.umt.edu
Web Page: http://ensight.eos.nasa.gov/Missions/terra/MONT.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
EROS LPDAAC	26.5	17.7	3.0	Chicago / Abilene
GSFC	37.3	21.3	5.1	MAX / Abilene
NSIDC	38.6	23.1	5.0	CU / FRGP / Abilene



Requirements:

Source Node	FY	mbps	Rating
EROS LPDAAC	'04 - '06	0.82	**Excellent**

Comments:. A strong diurnal cycle was present from all sources until late November. With the low requirement, however, the rating continues as "Excellent".

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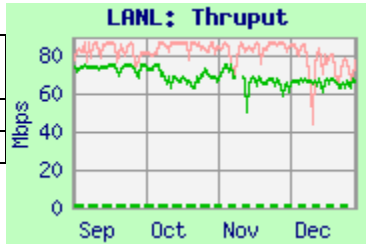
11) NM, LANL:

Rating: Continued **Excellent**

Teams: MISR
Domain: lanl.gov
Web Page: http://ensight.eos.nasa.gov/Missions/terra/LANL.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC	74.4	67.3	53.3	NISN SIP / ARC / ESnet
GSFC-PTH	87.0	83.9	35.0	MAX / ESnet



Requirements:

Source Node	FY	mbps	Rating
LaRC DAAC	'03-'06	1.03	**Excellent**

Comments: Performance was very stable this period. The rating remains "Excellent"

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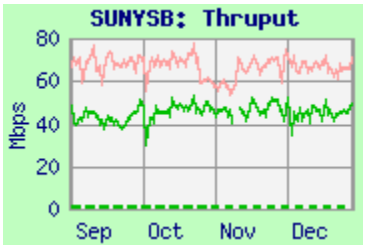
12) NY, SUNY-SB:

Rating: Continued **Excellent**

Teams: CERES, MODIS
Domain: sunysb.edu
Web Page: http://ensight.eos.nasa.gov/Missions/terra/SUNYSB.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaTIS	60.6	45.9	27.3	NISN / MAX / Abilene / NYSERnet
GSFC	81.7	67.1	40.9	MAX / Abilene / NYSERnet



Requirements:

Source Node	FY	mbps	Rating
LaTIS	'02-'06	0.57	**Excellent**

Comments: Performance was very stable this period. The rating remains "Excellent"

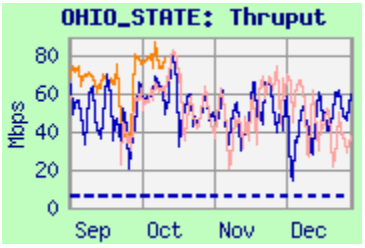
13) OH, Ohio State Univ:

Rating: Continued **Good**

Teams: ICESAT
Domain: ohio-state.edu
Web Page: http://ensight.eos.nasa.gov/Missions/icesat/OHIO_STATE.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-ICESAT	74.8	50.2	11.5	Abilene via NISN / MAX
GSFC-PTH	82.8	51.9	16.1	Abilene via MAX
GSFC-ENPL	91.4	76.9	58.4	Abilene via MAX



Requirements:

Source Node	FY	mbps	Rating
GSFC	'05-'07	6.3	**Good**

Comments: The congestion at ICESAT is quite apparent, with a 6.5:1 ratio of daily best to worst. The daily worst from ICESAT remains below 3 x the requirement, so the rating remains "Good". There is congestion from GSFC-PTH too, on the EBnet to Doors GigE. But from GSFC-ENPL, without this congestion, the daily worst from GSFC-MAX is more than 3 x as high – would be rated "Excellent"

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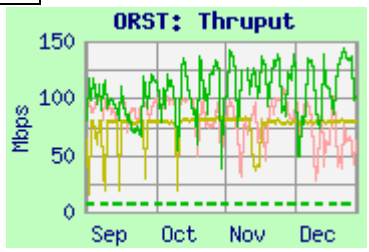
14) OR, Oregon State Univ:

Ratings: LaTIS: Continued **Excellent**
GSFC: Continued **Excellent**

Teams: CERES, MODIS Domain: oce.orst.edu
Web Page:http://ensight.eos.nasa.gov/Missions/terra/ORST.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaTIS	142.5	110.6	31.6	Abilene via NISN / Chicago
JPL	82.4	79.7	62.5	Abilene via CalRen
GSFC-PTH	111.6	81.6	19.4	Abilene via MAX



Requirements:

Source Node	FY	mbps	Rating
LaTIS	'04 - '07	7.5	**Excellent**
GDAAC	'02 - '07	0.25	**Excellent**

Comments: Performance was stable from all sources this period. The rating remains "Excellent".

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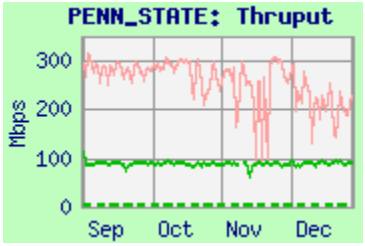
15) PA: Penn State Univ:

Rating: Continued **Excellent**

Teams:MISR
Domain: psu.edu
Web Page: http://ensight.eos.nasa.gov/Missions/terra/PENN_STATE.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC	92.6	88.5	50.1	Abilene via NISN / MAX
GSFC-PTH	313.4	256.0	118.9	Abilene via MAX



Requirements:

Source Node	FY	mbps	Rating
LaRC DAAC	'03-'06	2.6	**Excellent**

Comments: Performance was stable from LaRC (after improving with the NISN WANR upgrade in July '06); the rating remains "Excellent". The EBnet-Doors congestion at GSFC becomes evident starting in late October, and increasing in November.

16) TX: Univ. of Texas - Austin:

Rating: ↓ Good → **Adequate**

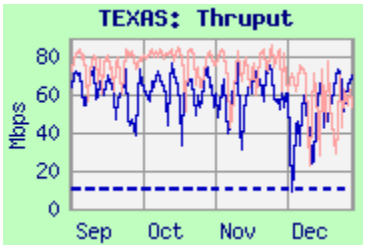
Teams: ICESAT
Domain: utexas.edu
Web Page: http://ensight.eos.nasa.gov/Missions/icesat/TEXAS.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-ICESAT	77.8	61.6	10.1	Abilene via NISN / MAX
GSFC-PTH	85.7	73.8	22.0	Abilene via MAX

Requirements:

Source Node	FY	mbps	Rating
GSFC-ICESAT	05-'07	11.1	**Adequate**



Comments: Diurnal congestion near ICESAT pushed the daily worst thruput even lower – now below the requirement, dropping the rating to "Adequate". There is less congestion from GSFC-PTH; the rating would be "Good".

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17) WA, Univ Washington:

Rating: Continued **Adequate**

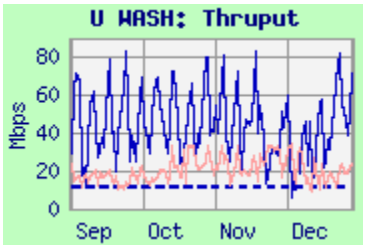
Teams: ICESAT
Domain: washington.edu
Web Page: http://ensight.eos.nasa.gov/Missions/icesat/UW.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-ICESAT	81.8	42.1	4.8	Abilene via NISN/MAX
GSFC-PTH	37.4	21.6	7.9	Abilene via MAX

Requirements:

Source Node	FY	mbps	Rating
GSFC-ICESAT	'05-'07	11.7	**Adequate**



Comments: Like other ICESAT sites, diurnal congestion from the ICESAT test node is strong. The daily worst from ICESAT remains below the requirement; so the rating remains "Adequate".

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18) WA, PNNL:

Ratings: LaRC: **Excellent**

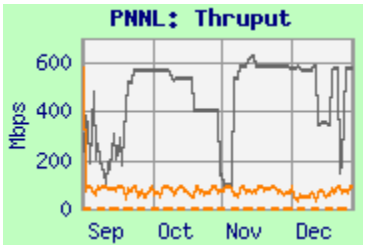
Teams: MISR
Domain: pnl.gov
Web Page: http://ensight.eos.nasa.gov/Missions/terra/PNNL.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC-PTH	90.2	70.5	8.3	NISN / MAX / ESnet
GSFC-MAX	575.4	569.4	488.8	MAX / ESnet

Requirements:

Source Node	FY	mbps	Rating
LaRC	'04-'06	1.4	**Excellent**



Comments: Performance from LaRC PTH increased with the NISN WANR upgrade in July '06. Although performance is noisy, the rating remains "Excellent". Performance from GSFC-MAX is **OUTSTANDING!**

19) WI, Univ. of Wisconsin:

Ratings: GSFC: Continued **Excellent**
LARC: Continued **Excellent**

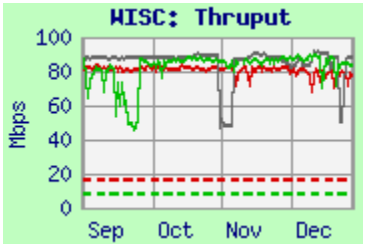
Teams: MODIS, CERES, AIRS Domain: ssec.wisc.edu
Web Page: http://ensight.eos.nasa.gov/Missions/terra/WISC.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-DAAC	86.0	81.2	56.5	MAX / Abilene / Chi / MREN
LaTIS	89.9	86.3	77.1	NISN / Chicago / MREN
GSFC-ENPL	90.1	88.1	84.2	MAX / Abilene / Chi / MREN

Requirements:

Source Node	FY	mbps	Rating
GSFC	'04 - '07	16.5	**Excellent**
LaRC Combined	'05-'07	7.9	**Excellent**



Comments: Performance from all sites was very stable this period (LaTIS had increased with the NISN WANR upgrade in July '06). The rating from both sources remains "Excellent".

20) Canada, Univ of Toronto:

Rating: Continued **Excellent**

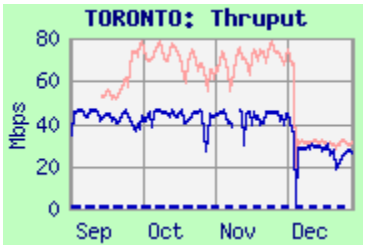
Team: MOPITT Domain: utoronto.ca
Web Page: http://ensight.eos.nasa.gov/Missions/terra/TORONTO.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC	45.7	42.0	23.5	NISN / Chicago / CA*net4
GSFC-PTH	80.1	67.9	32.7	MAX / Abilene / Chicago / CA*net4

Requirements:

Source Node	FY	kbps	Rating
LaRC DAAC	'02 - '07	100	**Excellent**
GSFC EOC	'02 - '07	512	**Excellent**



Comments: Performance from both sources was stable until a drop in December (cause unknown). The ratings from both sources remain "Excellent".

21) Italy, EC - JRC:

Rating: Continued **Good**

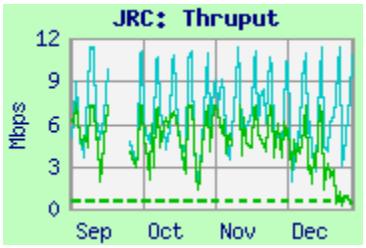
Teams: MISR Domain: jrc.it
Web Page: http://ensight.eos.nasa.gov/Missions/terra/JRC.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC	7.2	4.5	0.9	NISN / UUnet / Milan
GSFC-NISN	11.1	6.0	1.5	NISN / UUnet / Milan

Requirements:

Source Node	FY	mbps	Rating
LaRC DAAC	'02 – '07	0.52	**Good**



Comments: Performance was noisy but stable from both sources, with a dropoff from LaRC in December (fixed in January). The median daily worst from LaRC is below 3 x the requirement, so the rating remains "Good"

22) UK, London: (UCL)

Rating: ↓ Excellent → **Good**

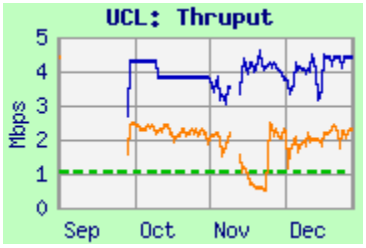
Teams: MODIS, MISR
Domain: ucl.ac.uk
Web Page: http://ensight.eos.nasa.gov/Missions/terra/UCLSCF.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC	2.5	2.2	1.2	NISN / Sprintlink / JAnet
GSFC PTH	4.3	4.0	2.9	MAX / Abilene / NY / Geant / JAnet

Requirements

Source Node	FY	mbps	Rating
LaRC DAAC	'02 – '06	1.03	Good



Comments: In late September the testing was modified due to a new firewall at UCL – now using ftp pulls by UCL instead of iperf from GSFC and LaRC. Results are much lower using this method – previous iperf thruput was 9.5 mbps from LaRC and 32 mbps from GSFC. Although stable, thruput is now below 3 x the requirement, so the rating drops to "Good".

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23) UK, Oxford:

Rating: ↑ Low → **Excellent**

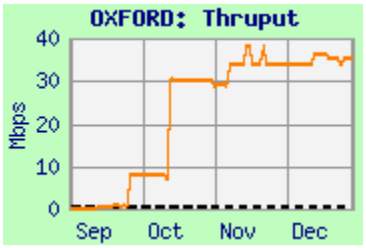
Teams: HIRDLS
Domain: ox.ac.uk
Web Page: http://ensight.eos.nasa.gov/Missions/aura/OXFORD.shtml

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-ENPL	33.9	33.8	3.5	MAX / Abilene / NY / GEANT /JAnet

Requirements: (IST Only)

Source Node	FY	kbps	Rating
GSFC	'03 – '06	512	Excellent



Comments: Performance improved in September when an Ethernet duplex mismatch at Oxford was corrected, and improved further with retuning in October. This improves the rating to "Excellent".

Test Results to other EOS HIRDLS UK Sites: Rutherford Appleton Lab

Web Page: http://ensight.eos.nasa.gov/Missions/aura/UK_RAL.shtml

Source → Dest	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC → RAL	25.2	23.0	7.9	MAX / Abilene / NY / GEANT / JAnet

Comments: Thruput to RAL remains noisy, but quite good – except for a period from mid-November until early January. Otherwise it was about the same as the last report. There is no stated requirement to RAL, so there is no rating.